

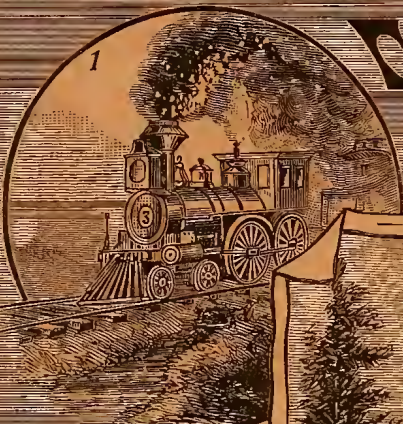
# THE GLOBE CO.

## BERNEY'S

### SMOKE, SPARK, GAS & STEAM.

#### CONSUMER

BOSTON, MASS.



3 Milton Pa. Destroyed



6 With Consumer Attached

7 Prairie on Fire





## BERNEY'S SPARK CONSUMER.

If we are to put faith in the testimony of experts and the conclusions of the law, the public is in the way of being benefited in one of the experiences of every day life which come home to the clothes, the eyes, and the comfort of thousands of travellers. At this season of the year, when it is a necessity of railway travel that the windows of cars should be open, the sparks from the locomotive are a terror and a torment. They are constantly renewed; they blacken the hands and face; they burn in the eyes; they are utterly beyond the control of the passenger. No one who is accustomed to travel but has sighed over and over again for relief from this plague, and so far in vain. The wear and tear of the cars and of the garments of passengers from this source is immense. If on every train this evil could be averted, the monetary gain would be large, and the addition to the pleasure and healthfulness of travel immeasurably increased. There is an invention which meets this universal demand. "Berney's Spark Arrester and Consumer" has been thoroughly tried, and answers, it is claimed, every purpose for which it was designed.

But there are other considerations which will place the economical aspects of this invention in a more striking light. It will save all danger from fires caused now by the sparks from locomotives, a danger ever present. Again, although this appears not to have been one of the original objects of the invention, it saves a very appreciable amount of fuel. From eight to sixteen per cent. saved in the cost of coal or wood is no slight item in railroad expenses. The railroad corporations may probably be left to their own shrewdness in adopting an apparatus which appears to be so necessary to the highest economy in the management of their business. If one of these spark arresters should ever be applied to a train in mid-summer, and it should prove to be what the experts declare it to be, the relief to the sweltering passengers will lead them to compare the road so free from dust with those subjected to its horrors in a way which will open the ears of directors, and put them at least upon explanations. At any rate, the invention must be thoroughly tested. If it is worthless, it can readily be discarded; if it is what it is claimed to be, no railroad can afford to be without it.—*Journal*.

### Fires Caused by Sparks!

Millions of dollars worth of property is destroyed by sparks, and we would call the attention of the reader to the engravings on the front page:

**PLATE 1.**—Shows a locomotive sending forth a great volume of Smoke and Sparks; and

**PLATE 6.**—Illustrates a locomotive, railroad train without any Sparks or Smoke.

**PLATE 2.**—Exhibits the destruction of a STEAMBOAT BY SPARKS.

ST. LOUIS, Nov. 2, 1879.

Steamer Bismark, lying just below the south wall of the Arsenal, three miles below the centre of the city, caught fire about noon to-day, and in a short time was totally destroyed. The origin of the fire is not known, but the flames were first seen issuing from the forward part of the cabin. The presumption is that it caught from sparks from a locomotive on the St. Louis, Iron Mountain & Southern Railroad, which runs within a few yards of where the boat lay.—*Herald and Journal*.

**PLATE 3.**—The town of Milton, Pa.

**Behold What a Spark Doeth. The Town of Milton, Pa., Destroyed, Friday, May 14, 1880. Hundreds of People Rendered Homeless. Loss, \$1,500,000. Several Lives Sacrificed.**

The thriving town of Milton, Pennsylvania, which has a population of about three thousand, sustained a loss of \$1,500,000 by fire to-day, rendering homeless 1500 people. About 11 45 o'clock A. M., smoke issued from the roof of the framing shop connected with the car works of Murray, Doughal & Co., adjoining the Philadelphia & Erie Railroad. The fire, it is believed, was caused by sparks. In a few moments the whole building was ablaze. In less than an hour four of the main buildings of the works were destroyed, involving a loss of at least \$1,500,000. The wind was blowing briskly from the north, and house after house yielded to the flames. This evening at 7 o'clock 600 buildings are in ruins as the result of the conflagration. Word was promptly sent to Williamsport, Sudbury, Lewisburg, Danville, and other towns, for assistance, and steam engines came in response as soon as the railroad companies could offer transportation, but the fire had gained such a headway they could accomplish very little good. The flames, fanned by a strong wind, spread with marvellous rapidity, scarcely leaving a house standing in their pathway. The fire reached its worst phase at 3 o'clock, when the town presented the appearance of a sea of flame.—*Boston Herald, May 15, 1880.*

The Fire in Milton was caused by Sparks from a Locomotive.

—*Globe, May 16.*

## PLATE 4.

### A Sleeping Car Burned. Narrow Escape of the Occupants.

MEMPHIS, Feb. 23, 1880.

This morning the sleeping-car "Texas," attached to a train from Louisville, was discovered to be on fire just before reaching Galloways, and by the time the train had stopped, the flames had gained such headway that the passengers were barely able to escape with their lives, leaving clothing and light baggage behind, which, together with the car, were entirely consumed. Many passengers, including some ladies, arrived here *en dishabille*.—*Herald, Feb. 24, 1880.*

## PLATE 5.

### Fatal Railroad Accident in Missouri.

ST. LOUIS, March 19.

Specials from Kansas City say an extra freight train on the Hannibal & St. Joseph Railroad went through the approach to Long Branch bridge, six miles east of Cameron, Mo., this morning. The locomotive and ten cars were wrecked. Ira Green, engineer, was instantly killed, Edward Conner, fireman, mortally wounded, and Levi Rocketts, brakeman, was badly injured. The approach had been burned during the night. The fire is supposed to have been caused by sparks from a previously passing train.

—*Providence Journal.*

## PLATE 7.

### A Continuous Line of Fire along the Northwestern Railroad One Hundred and Twenty-Nine Miles in Length, and Extending Back from Twelve to Fifteen Miles.

CHICAGO, May 16.

Dispatches from the vicinity of Green Bay, Wis., report that the spring fires north of that point are raging frightfully along the line of the Northwestern Railroad, and from Marinette, Wis., to Ishpeming, Mich., a distance of 129 miles. It is now almost one continuous blaze, the fire extending back, at some places, from 12 to 15 miles. The Northwestern Railroad Company lost 130 cords of wood yesterday, and the Quincy Mining Company lost 5000 cords. Several small houses were burned. The losses on pine lumber are heavy, aggregating already several hundred thousand dollars, and a heavy rain will alone arrest the progress of the fire.—*Advertiser.*

### Fire on Long Island.

NEW YORK, May 21.

A fire has been raging several days between South Oyster Bay and Farmingdale, on Long Island, and has caused considerable destruction to property. It is supposed to have caught from a locomotive, and broke out in Mappanepqua swamp. It burned through the swamp and adjoining woods, destroying all the underbrush and most of the fences, and extended northward toward Farmingdale. It continued to burn until Wednesday night, when it was quenched by rain.—*Boston Journal.*

### Railroad Bridge Destroyed.

The covered bridge of the New London Northern Road over the Yantic, at Norwich Falls, took fire Monday afternoon from sparks from the four o'clock train up, and was totally consumed. The structure was thoroughly dried, and the heavy wind blowing made all attempts to save it useless.—*Herald.*

### The Devastation Spreads in all Directions. Locomotives Setting the Fires.

NEW YORK, May 17, 1880.

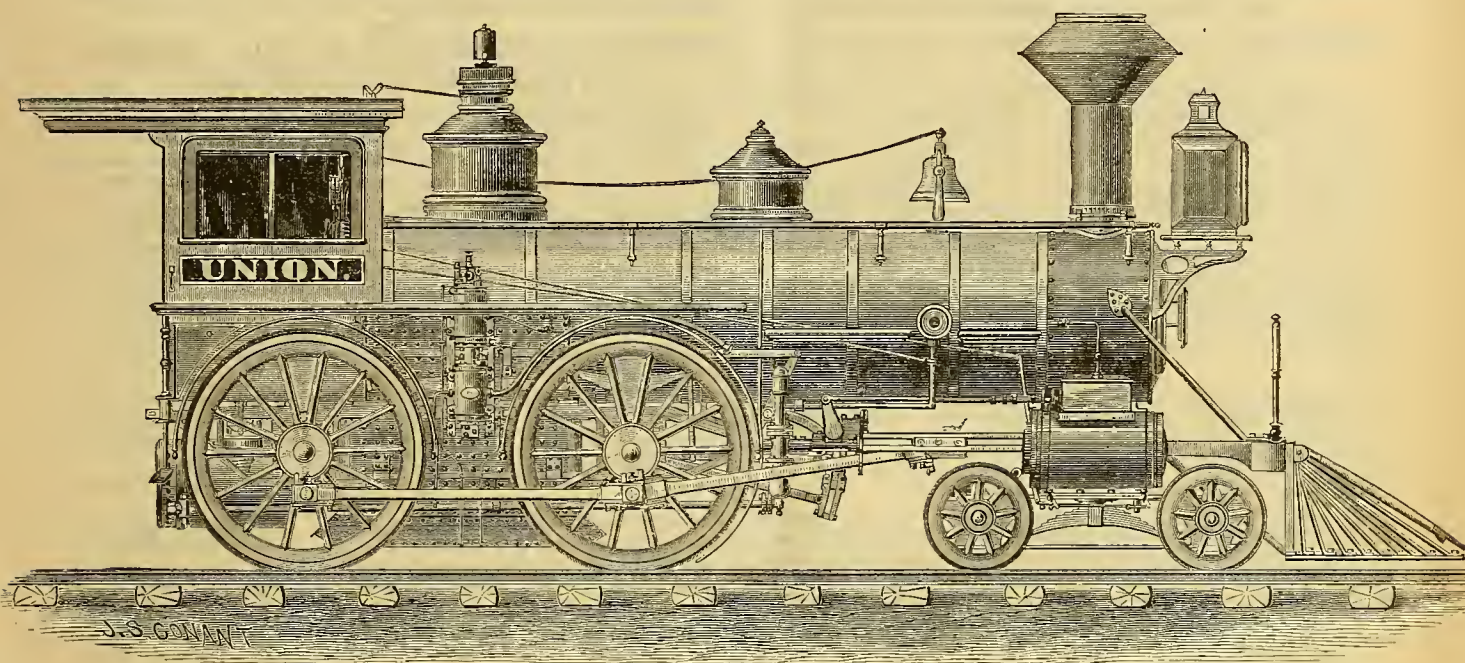
The fire fiend has not relaxed its hold on southern Jersey. There was great destruction yesterday by the flames. The wind began to blow from the northwest at sunrise, and blew a gale all day, fanning to life the dying embers, and rekindling the old blazes that were flickering on the edges of the cedar swamps. By 10 o'clock a line of fire was travelling southward over the Colwell track, that had escaped before, and the region from Egg Harbor to Mazecum, twelve miles southeast to Tuckahoe, twenty-three miles to May's landing, and seven miles southwest to Millville. Twenty-seven miles of country were in flames. In the country, to the west of Egg Harbor City, on the line of the Camden & Atlantic Railroad, as far as Elmwood, seven miles had been eaten bare by the flames the day before, but the fire, beginning to the south of Egg Harbor vineyards, which had been saved the night before, worked around to the westward in the face of the gale; and when the solid woods near Hammatown came upon its lee, it went darting down to the Little Egg Harbor river valley, sweeping the country clean as it passed by. So rapid was its onward movement that people fled from its advance to escape with their lives. The ground burned over yesterday in Colwell tract alone is more than 18,000 acres, and the surface over which fire travelled was at least six times as much. In all, more than half as much territory was burned over in one day than had been swept by flames during the entire two weeks in which fire raged in southern New Jersey. A church and school were destroyed in Cumberland County just after the departure of the congregation. Hundreds of people fought the flames at various points. Quite a number of frame buildings were burned and human life imperilled, but nobody perished yesterday so far as reported. People living along the railroad complain bitterly of the damage done by engines, especially those in which hard coal is used. The fires are started by locomotives in many cases. A few days ago one engine started seven fires within a distance of ten miles.—*From Boston Globe.*

We could quote over a thousand fires from the files of the newspapers in the last ten years, involving the loss of millions of dollars.



# SPARKS AND SMOKE CONSUMED,

Saving an Immense Amount of Coal and Wood in Railroad Locomotives.



## THE GLOBE COMPANY,

OF HARTFORD, CONN.

OFFICE, Nos. 10 & 11 RIALTO BUILDING, 131 DEVONSHIRE STREET,  
BOSTON, MASS.

Opposite the Boston Post Office.

INCORPORATED MAY 22. 1879.

COMMON STOCK,	-	-	-	-	-	-	\$750,000
PREFERRED STOCK,	.	-	-	-	-	-	\$250,000
							<hr/>
							\$1,000,000
SHARES,	-	-					<hr/>
							\$25.00 EACH.

JOSEPH KELLEY, *President.*

ALLEN B. CURRIER, *Treasurer.*

GEORGE E. DUTTON, *Secretary.*

ASA WELLINGTON, *Counsel.*

A. BERNEY, *General Manager.*

PATTERN AND MACHINE SHOPS,  
83 HAVERHILL STREET, BOSTON.

Castings made at Foundry, Pocasset, Mass.

The Preferred Stock receives a 10 per cent annual dividend out of the net earnings of the Corporation, before the Common Stock can receive a 10 per cent dividend. Then both Stocks receive any further dividends mutually, alike.

THE COMPANY commenced active business May 20th, 1880, paid its first quarterly dividend of 2½ per cent., August 1st, 1880, out of its net earnings. Its 2nd quarterly dividend, November 1st, 1880; and will pay a regular quarterly dividend on the 1st of February, May, August, and November, every year.

**It has its own Pattern and Machine Shops.**

Its offices—In Boston, and will soon establish Branches in CHICAGO, ILLINOIS, and ATLANTA, GEORGIA; MONTREAL, CANADA, and in the CAPITALS OF EUROPE.



## LAWS AND DECISIONS:

The following are a few of the Legislative enactments and abstracts of Common Law Decisions, relating to the Rights, Duties, and Liabilities of Railroad Companies, prepared for publication by request of the Globe Company, are herewith respectfully submitted.

ASA A. WELLINGTON, *Attorney and Counsellor-at-Law*,  
131 Devonshire St., Boston, Counsel for "The Globe Co."

Gen. Statutes, title 4, sec. 32, p. 455: "When a building or other property is injured by fire communicated by a locomotive engine, the corporation using it is responsible for such injury."—*Maine Laws*.

Gen. Laws, ch. 162, sec. 8: "The proprietors of every railroad shall be liable for all damages which shall accrue to any person or property by fire or steam from any locomotive or other engine on such road."—*New Hampshire Laws*.

Gen. Statutes, ch. 28, sec. 78: "When any injury is done to a building or other property by fire communicated by a locomotive engine of any Railroad Corporation, the said corporation shall be responsible in damages for such injury, *unless they shall show that they have used all due caution and diligence, and employed suitable expedients to prevent such injury.*"—*Vermont Laws*.

Gen. Statutes, ch. 63, sec. 101: "Every (railroad) Corporation shall be responsible in damages to any person or corporation, whose buildings or other property may be injured by fire communicated by its locomotive engines."—*Massachusetts Laws*.

Rev. Statutes; title, Railroads. Secs. 13, 14, 15, 16: Sec. 13.—"It shall be the duty of every Railroad Company in this State, and of every company or person operating or using any railroad in this State with a locomotive engine or locomotive engines, *to take and use all practicable means to prevent the communication of fire from locomotive engines used or employed by them, or any railroad in this State in passing along or being upon any such railroad, to any property of whatever description of any owner or occupant of any land adjacent or near to such railroad.*"—*New Jersey Laws*.

The following are abstracts of Supreme Court decisions pertaining to the above subject:

(1.) *Spanlding vs. Chicago & C. R. R. Co.*, 39 Wis. 110. This was an action to recover damages for injuries to the plaintiff's woodlands by fires alleged to have been caused by an insufficient and unsafe locomotive engine of defendant.

The Court, in rendering its decision, say:—"The law upon this subject is, that the companies, in the construction of their engines, are bound not only to employ *all due care and skill* for the prevention of mischief arising to the property of others by the emission of sparks or any other cause, but they are also *bound to avail themselves of all the discoveries which science has put within their reach for that purpose*, provided they are such, as under the circumstances it is reasonable to require the companies to adopt."

(2.) *Gilman vs. St. Louis R. R. & C. Co.*, 39 Ill. 455. This was an action to recover for loss of hay, &c., destroyed by defendants' locomotive engine. The evidence tended to show that the engine was running without suitable protection to prevent the emission of sparks from its smoke stack, and that fire caught on several adjacent farms immediately after the passing of the train.

The Court, in rendering its decision, say:—"It is not requiring too much of railway companies, *which are sending over the country so dangerous an element as fire, that they should use all the appliances of science, and the highest degree of diligence*, to prevent the destruction of the immense amount of property contiguous to their lines."

(3.) *Bass vs. Chicago & C. R. R. Co.*, 28 Ill. 9. This was an action to recover for wheat burned by defendants' locomotive engine, under a charge of negligence. The court, in its opinion, makes use of the following language:—"The evidence in this case was abundantly sufficient to show that the injury of which the plaintiff complains was caused by the emission of sparks or particles of ignited coke coming from one of the defendants' engines; and there was no proof of any precaution adopted by the company to avoid such a mischance. The defendants are a company *entrusted by the Legislature with an agent of extremely dangerous and unruly character, for their own private and particular advantage*; and the law requires of them that they shall, in the exercise of the right and powers so conferred upon them, *adopt such precautions* as may reasonably prevent damage to the property of third persons, through, or near, which their railway passes."

(4.) *Bedel vs. Long Island R. R. Co.*, 44 N. Y. 367. Action to recover damages for alleged burning by defendants of the plaintiff's dwelling-house, situated near the line of their road, in the village of Hamstead, Queen's county, October 23, 1863. The defendants' engine (a dummy) had formerly been guarded by a spark catcher, or screen on the top of its smoke pipe; but a short time previous to the fire, it had from some cause been removed, but soon after the injury complained of, was replaced.

The Court, in rendering its decision, say:—"It matters not that it was not common to use the spark arrester upon dummy engines. It is enough that the evidence tended to show that this engine could not, *with safety*, be run near dwellings *without this appendage*; and that it could be with it; and hence ordinary prudence required its use. This was evidence from which the jury could properly infer negligence."

### RIGHTS AND LIABILITIES OF RAILROAD COMPANIES AS COMMON CARRIERS OF FREIGHT.

Railroad companies carrying goods or merchandise for hire or reward, are in the strictest sense *Common Carriers*; and as such, are entitled to all the rights and privileges, and subject to all the liabilities of *Inland Common Carriers*. They have a *Lien* for all proper charges, whether customary or under special contract on all freight earned in the transportation of merchandise. From the time of delivery and receipt of the goods, until their arrival at the place of destination, the law makes them in the nature of *insurers*; and they are answerable for all losses which do not fall within the excepted cases of the act of God, (meaning inevitable accident, without the intervention of man) and public enemies.

In all cases of loss, the law presumes against them, unless they can show that such loss was occasioned by the public enemy, or by such acts as could not happen by the intervention of man, as lightning and tempests.

They are bound to do what is required of them in the course of their employment as common carriers, if they have the requisite convenience to carry, and are offered a reasonable or customary price; and if they refuse, without just grounds, they are liable in damages.

They are liable for the acts of their agents, servants and employees, as well as their own.

They are responsible for the loss of a box and its contents, or a parcel of goods, though they be ignorant of the contents, or though their contents be ever so valuable, unless at the time of delivery to them they make a *special acceptance*; with this qualification, however: if the owner be guilty of any fraud or imposition in respect to the carrier, as by concealing the value or nature of the article, or deludes him by his own carelessness in treating the parcel as a thing of no value, he cannot hold the carrier liable for the loss of the goods.

They have the right to refuse transportation of articles in their nature dangerous to life and property, as dynamite, &c.

#### Special Notices.

It is a very common practice for common carriers to attempt to restrict their responsibility by special notice of the extent of what they mean to assume; and this may relieve them to a certain extent. The goods in such case are understood to be delivered on the footing of a *special contract*, superseding the strict rule of the common law; and it is necessary in order to give effect to the notice, that it be *previously brought home to the actual knowledge of the bailor* (consignor) and be *clear, explicit and consistent*. The doctrine of exemption by means of these notices, as construed by the Courts, is, that they serve to protect the carrier *only from extraordinary events, or from that responsibility by mistake or inadvertance, which belongs to him as an insurer*, and not from the consequences of the want of due and ordinary personal care and diligence. The Courts are inclined to construe these notices most strictly against the party issuing them.

### AS COMMON CARRIERS OF PASSENGERS.

Railroad companies, as carriers of passengers, are bound to provide competent vehicles, suitably and safely equipped, and with careful and skillful persons to manage them. They are bound to give all reasonable facilities for the reception and comfort of passengers, and to use *all precautions* as far as human care and foresight will go, for their safety on the road. They are answerable for the smallest negligence of themselves and servants.

They are not at liberty to turn away passengers, if they have sufficient room and accommodation. But they are not bound to receive passengers who refuse to comply with the reasonable regulations of the road, or are guilty of gross and vulgar habits of conduct, or are disorderly, or whose characters are unequivocally bad, or whose object is clearly for hostile or injurious purposes.

They have the right to establish and enforce reasonable and wholesome rules and regulations for the conduct of passengers; also to establish for their sole benefit, uniform fares, tolls, and charges upon all passengers and property conveyed or transported on their roads, subject only to such alterations as may be made by legislative enactments.

#### Personal Baggage of Passengers.

It was formerly held that common carriers of passengers were not answerable as *carriers* for the baggage of the passengers, unless a *distinct price* was paid. But the custody of the baggage is an accessory to the principal contract; and the modern doctrine, and the tendency of modern cases, seem to be to place coach proprietors, in respect to baggage, upon the ordinary footing of *common carriers*. This responsibility may, to a certain extent, be restricted by *special notice*.



# LOCOMOTIVES RUN WITH ANTHRACITE DUST.

But the most valuable Patents, owned by the Company, grant to them the monopoly of running Railroad Locomotives with Anthracite Waste as the only fuel used, of which there are millions of tons, now considered less than valueless, a nuisance in the State of Pennsylvania.

And here we quote from an Essay read before the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, at Saratoga, September 1st, 1880, by Prof. P. W. SHEAFER, Engineer of Mines, Pottsville, Pa., on the

## Anthracite Coal Fields of Pennsylvania and their Exhaustion.

### COAL IS MONARCH OF THE MODERN INDUSTRIAL WORLD.

With its wonderfully diversified interests, and their ever expanding development. But, supreme as is this more than kingly power at the present time, comparatively brief as has been the period of its supremacy, and unlimited in the popular apprehension as are its apparent resources, yet already can we calculate its approximate duration, and predict the end of its all-powerful but beneficent reign. This is especially the case with our limited Anthracite.

The noisy trains crossing the valleys and climbing the mountains, all verge, day and night, to these hives of industry, where multitudinous steam engines are hoisting and pumping and breakers crushing. Thousands of miles of railroad thread the surface, and dive into the interior, to roll out the black diamond flood, in millions of tons, to warm and employ the nation.

### THE FEARFUL LOSS

Of good material involved in mining and preparing Anthracite, as shown in the accompanying tables, though greatly to be deplored, seems to be almost inevitable.

It is estimated that not more than 66 per cent. of the coal is ever taken out of the mines—that which is brought to the surface is run through a huge structure from 80 to 100 feet high, very appropriately called a "BREAKER," ingeniously contrived for the destruction of coal.

There are over 300 (340) of these immense buildings in the Anthracite region, costing, on an average, \$50,000 each, or on an aggregate of \$15,000,000. To the top of these the coal is hoisted, and then descends through a succession of rolls and screens, emerging at the bottom, in a series of assorted sizes, from huge blocks of lump coal to unmerchantable dust, which forms a grievously large proportion of the whole. This process involves a loss of good coal

### EQUAL TO 25 PER CENT.

of the entire quantity mined. No one is paid. It is a total loss to land owner, miner and shipper. The preponderance of waste coal is illustrated by the accompanying tables the Professor has kindly sent us, which show, from actual accounts kept at the mines, that 360,017,817 tons have been sent to market up to 1879, leaving about 90,000,000 of waste outside of the mines ready for shipment or use. Our present consumption is over 20,000,000 annually, leaving 5,000,000 of tons of waste.

It is computed by the best authority that 100,000,000 tons of fine coal and dust now lay near the breakers. *The Gaslight Journal* stated that 106,666,325 tons of dust were then in Pennsylvania. AN EXPERIMENT IN BALTIMORE, Maryland, made in October, 1879, by blowing powdered coal-dust into a boiler-furnace, evaporated the astonishing amount of sixteen pounds of water to a pound of dust, while the lump coal in the same furnace evaporated twelve pounds.

Dr. WM. H. WALL, Secretary of the Franklin Institute, Philadelphia, Pennsylvania, who has thoroughly investigated the subject of the utilization of the coal waste daily accumulating in the anthracite coal regions, states that the desirability of effecting the economical utilization of this waste is universally conceded. To take a moderate estimate it is not far from twenty-five per cent. of the total production. The question has for years attracted the attention of inventors, and of those interested in mining and transportation of coal; others, with every expansion of the industries, depended upon coal for their existence, and therefore, highly sensitive to the price of this commodity, the necessity for its successful solution will be enhanced; thus far, however, it may be safely asserted no process has been devised for this purpose which could be operated with any reasonable amount of success.

The difficulties in the way of effecting the utilization of the anthracite waste are very great in the chemical and physical nature of the material.

WILL THE SUPPLY OF COAL-DUST FAIL? NO! for there are about 100,000,000 tons of it now lying waste in Pennsylvania around the mines, and the annual production is about 5,000,000 tons.

WILL THE PRICE OF IT INCREASE AS SOON AS THERE IS A DEMAND FOR IT? NO! for it costs the companies quite a sum annually to haul it away to the hills, and it can as easily be sent to market, and as the daily supply will much more than fill orders for it, some miners must still haul to the waste hills.

IS IT GOOD COAL? The miners say it is the best as it is the softest and purest, being free from stone or slate.

### PLEASE STATE THE SAVING TO A BOSTON RAILROAD COMPANY BY THE USE OF THIS COAL FOR ONE YEAR.

In order to enable a locomotive to burn anthracite waste, the boiler and furnace would have to be improved so as to make steam quickly, rapidly, and very economically; the result would be a saving of one-third of the coal. Now, we will suppose a locomotive is burning 5,000 pounds of coal daily, that would be in 300 days 750 tons; at present price (\$5.00 a ton), is \$3,750; 500 tons of coal-dust at half that price would be \$1,250, saving \$2,500 a year on one engine, NO GAS! NO SMOKE! NO SPARKS!

In conversation with a master-mechanic of an Anthracite Coal Burning and Mining Railroad, after looking at our inventions, he said: "If you can burn anthracite waste in locomotives, I will alter every one of our 500 boilers in any way, shape, or manner. I will put on feed-water heaters, spark and gas burners, new fire-boxes, or any thing necessary. Why, it would save our company \$750,000 a year." There spoke out the true master-mechanic, viewing the improvements in a broad and enlightened sense: it would save his company much money, and it should be done. It was his duty; that is what he was placed there for; not merely to superintend the works, but to save the company money, by adopting any new and valuable improvements.

THE READING R. R. Co. of PENNSYLVANIA, have expended tens of thousands of dollars in experiments in new locomotives to burn small coal, called pea or chestnut.

### WHAT WE BURN, BY OUR SYSTEM, IS ANTHRACITE COAL DUST.

As a conductor said to Mr. Berney: "Why, you are burning the very waste of coal. What next?"



# Will it pay to burn the Smoke, Gases, and Sparks in Railroad Locomotives?

To add the smoke-burning attachments to a locomotive while fitting our spark-burner on costs but a trifle. The great saving of fuel by burning the smoke in a furnace is so large that even on the score of economy and paying an enormous interest on the money invested should cause its general adoption.

While it may be some extra trouble to alter the boilers, yet it will pay more for so doing than any other work that can be done on a railroad. The stockholders of these companies invest their money for the sake of the dividends, and employ their officers, mechanics, and laborers to earn not only their wages, but the dividends, by every legitimate means. Is not saving fuel one of them?

All Master Mechanics know that the more perfect the combustion, the hotter and whiter the heat. It is also a well-known fact that 1450 pounds of coke will, and does, make as much steam as 2240 pounds of coal in common locomotives. **THIS IS BEYOND ALL DISPUTE.** See *English Works on Locomotives*.

Now, if the other 800 pounds of coal could be burned, it would be utilized, instead of sending it out of the stack as a nuisance in the form of smoke and vile-smelling gases, to annoy the passengers and residents along the railroads. The following is a digest of a letter from the BOSTON GAS-LIGHT CO.:—

BOSTON, July 29, 1879.

ALFRED BERNEY, ESQ.—Dear Sir,—I find, in looking over our experiments with coal, out of a ton of 2240 pounds we get about 800 pounds of crude inflammable gas, and 1440 pounds of coke. Yours, etc., C. D. SAMSON.

D. K. CLARK, an eminent English engineer, in his standard work on locomotives, says: That by introducing jets of steam into locomotive fire-boxes with air, the character of the steam, when thus associated with air, is entirely changed in its action on the fire as compared with pure steam. *Its effect is invariably to brighten the fuel and inflame the surface, so that active combustion of solid proceeds above as well as below. The induced currents of air and steam dash across the surface like flashing cones of light, and they groove out the fuel that lies in their way. The production of Steam is invariably increased, and the Smoke and Gases lessened.*

By our process of burning, we add another element of fuel rarely seen in a fire-box, made by the combination of a crude hydrogen (steam), oxygen (air), carbon (smoke), all intimately mixed in the fire-box. They form the hottest flame next to hydrogen. That is, we make CARBONIC DIOXIDE GAS; OR, AS PROF. CRAVEN STATES, A DILUTED HYDROGEN GAS.

Mr. M. N. Forney, in his catechism on the locomotive, states:

"From a carefully made experiment, it was found that the total heat of the combustion of one pound of carbon, when converted into carbonic oxide, was 4,400 units, whereas, when it was converted into carbonic dioxide, 14,500 units were given out. It will thus be seen that it is extremely wasteful to burn coal without a sufficient supply of air: even when no smoke is seen from the stack, the combustion is very imperfect as now made."

With our steam jets, we supply another important chemical to supply the place of a very large amount of air, and make almost perfect combustion.

*Extract from an old Ex Master-Mechanic's Letter.*

Every Master-Mechanic knows that, if his locomotives are kept in first-class order, he can save the cost of it in the economy of fuel alone, besides the safety of the engine and train; but the officials (seldom mechanics) almost always keep that department down (as to expense), but pay enormous coal and wood bills without a question as to why they are so large, thinking that wood and coal must of course be used, or the cars cannot be hauled.

David Upton, Esq., Master-Mechanic on the New York Central R. R. in 1859, proved that the machine-shop could save money, if allowed to put on improvements and keep the locomotives in order.

*From the Scientific Artisan of January 6, 1859.*

The New York Central R. R. (locomotives) was run for the year 1858 with an expenditure of \$549,178 for fuel, against \$847,853 for 1857. SAVING \$298,675 IN ONE YEAR. Miles run in 1858, 3,942,547; 1857, 3,984,920. Cost per mile in 1857, 21½ cents; in 1858, 13 cents. We regret that the process by which such an extraordinary saving has been effected is not given: it would be of the greatest value to other roads.

As Mr. David Mathews had sold the Company his Patent Spark Consumer three years before that, he wrote to Mr. Upton, M. M., asking for information. The following letter was received in reply to this:—

ROCHESTER, N. Y., January 17, 1859.

MR. DAVID MATHEWS, Philadelphia, Pa.:

Dear Sir,—Yours of the 12th inst. is received, as also pamphlets referred to, for which I am greatly obliged. The economy of fuel by locomotives upon this road is due in part to the fact that the engines are kept in the best possible condition; the fire-boxes and boilers kept tight and well lagged, radiation from heated surfaces prevented by all possible means, and the working parts made to reach their maximum of efficiency. BUT A GREAT PROPORTION OF IT IS DUE ALSO TO THE GENERAL USE OF YOUR PATENTED CHIMNEY, WHICH IS AN EXCELLENT INVENTION, AND VERY SERVICEABLE IN THIS REGARD.

DAVID UPTON, M. M.

Mr. Mathews' Stack was a hideous monstrosity; was only used with wood, and went into disuse after soft coal was used; and the result has been, no other has taken its place until this new one of Mr. Berney's.

From a page in *The Railroad Gazette* of February 27, 1880, on *English vs. American Locomotives*:

"If Mr. Bicereton had mastered this subject, he would have stated that the consumption of American engines is, per ton per mile, hauled from 50 to 100 per cent, in excess of that required by English engines for the same work, and for this statement we are indebted to the Master-Mechanics' Institute, a society in effect of locomotive superintendents."

A committee appointed by this society, to inquire into the cause of the want of economy in American engines, actually advocated the purchase of an English engine, that experiments might be made with it, in order to ascertain how, and why it was, that such lines as the Settle & Carlisle could be worked with an expenditure of fuel so small that nothing to parallel it could be found from one end of the 78,000 miles of railway open in the United States to the other.

There is little reason to doubt, that much of the economy of English locomotives is due to the admirable repair in which they are maintained; leaky valves are not tolerated, blowing piston-rings are at once replaced, the engines are kept quite true, and the old adage of a stitch in time saves nine, is constantly acted upon.

*But this is not the case in America*, and in consequence a great annual mileage is got out of locomotives, but for economy of fuel and oil, there is no comparison between English and American engines.

The Question of Economy in the burning of Fuel must hereafter be the paramount one for all persons in charge of the motive power of Railroads, Steamships, and other Companies, and in no way can coal and wood be saved as easily as by the use of our inventions.



# THE VARIABLE EXHAUST TIP.

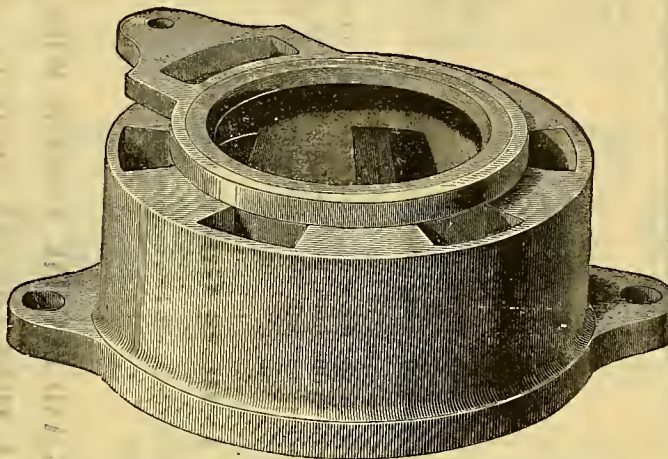
It is Simple, Cheap,  
and Durable.

WILL LAST MANY  
YEARS.

Cannot Stick, if Used Only  
Once a Week.

GIVE ONE A TRIAL.

THIS ONE IS  
PERFECT.



THE ABOVE ENGRAVING SHOWS IT ONE-THIRD SIZE.

SAVES FUEL, MAKES  
STEAM FREELY.

Can be Regulated so as to  
Carry Steam at

100, 110, 120,  
130, 140

OR MORE POUNDS  
PRESSURE.

Many Locomotives have  
them on.

WITH VARIABLE EXHAUST TIPS, THE ENGINEER AND FIREMAN HAVE COMPLETE COMMAND OF THEIR FIRE, AND, OF COURSE, THE STEAM. THEY CAN BURN POOR COAL, FINE COAL, GREEN WOOD, OR DRY WOOD. IN FACT, THERE WILL BE NO EXCUSE FOR LOST TIME ON ACCOUNT OF THE FUEL.

Every engineer should have the control of his Exhaust Tip as much as the throttle-lever or power brake. If he is worthy of being trusted with cars filled with human lives and valuable freight, he is fit to have charge of the blast that makes the steam; and the experience of some years as to the working of variable Exhaust Tips convinced the undersigned that they were important to have in use upon LOCOMOTIVES, FIRE ENGINES, PORTABLE, STATIONARY and MARINE ENGINES, where the Exhaust Blast was depended upon to cause a vacuum in the smoke-arch and keep the fire burning.

*Why they have not gone into general use is, that all previous ones were liable to stick, and were too cumbersome and costly. This Tip has overcome all these difficulties, and now we offer a simple Tip, consisting of an ordinary one cast with ports in it fitted into another with ports to correspond, with a handle attached. It is simplicity itself.*

BOSTON & LOWELL R. R. DEPOT, BOSTON, Sept. 20, 1880.

To whom it may concern:

Twelve or more of the locomotives of this road have the Variable Exhausts attached, which work admirably, making a large saving of fuel and of back pressure, which latter largely increases the efficiency of the locomotive, making also another saving. Our Master Mechanic, and the Engineers who run the locomotives which have the variable exhaust attached, speak of it in the highest terms of praise. We shall increase the number as fast as we can conveniently.

WM. M. PARKER, Supt. B. & L. R. R.

ROUND-HOUSE, EAST CAMBRIDGE, MASS., Jan. 30, 1880.

I had the Patent Variable Exhaust put on an engine 16x24, in April, 1878. It gave good satisfaction, and is in good order to-day, having had no repairs or trouble with it.

A. D. BAILEY, Engineer.

BOSTON & LOWELL RAILROAD,  
EAST CAMBRIDGE, MASS., Jan. 31, 1880.

Test was made on a Mason engine, 17x24, for seven days, with fixed Exhaust, then seven days with Variable Exhaust; result, saving 481 lbs. of coal per day. Engine carried her water better, run easier, made better time.

M. R. WILBUR, Engineer.

WINTHROP JUNCTION, Aug. 12, 1879.

Gentlemen:—I put on your Exhaust on our locomotive No. 2 last May, in which it has been in use every day, and has given entire satisfaction and a saving of 15 per cent. of coal. I have it on another locomotive, and I find it gives the same result as the first one. We never had any trouble with them; they work as free to-day as they did the day they were put on.

J. L. FOLSOM, Master Mechanic of the  
Boston, Revere Beach & Lynn R. R.

THE VARIABLE EXHAUST TIPS are included in our Smoke and Spark Consumers. Licenses at Reduced Rates.

## BERNEY'S SAFETY VALVE MUFFLER AND FEED WATER HEATER.

This neat, cheap, and economical muffler is easily attached to a safety valve, and the arrangement to prevent noise, and regulate the heat in the tender is perfect, avoiding the objections to blowing back steam into the tender. A trial is earnestly solicited.

## BERNEY'S FEED-WATER CIRCULATOR.

This invention can be applied inside or outside the boiler, and is inexpensive as to construction. All Engineers who have studied the principle of Circulation admit that it is of vital importance to perfect the generation of Steam economically, to cause an artificial and rapid mingling of the extreme hot and cool water from one part of the boiler to the other. It assists the Steam to rise to the top of the water. Another valuable feature of this invention is this: That in pumping or injecting in the feed-water it does not reduce the force of the Steam, as indicated by the Steam-gauge.

This remarkable proof of the value of the invention will be appreciated by all Master Mechanics, Engineers and Firemen.

THE CIRCULATOR WILL BE APPLIED BY THE GLOBE CO., WHEN DESIRED, WITH THE SPARK CONSUMER.

Drawings sent on application. Experimental Tips, which are sent to any company, free of charge, for trial, address

THE GLOBE CO., Boston, Mass.



THIS ENGRAVING IS PRINTED ON OUR PREFERRED STOCK.

**THIS IS PREFERRED STOCK**  
AND IS  
**LIMITED TO \$ 250,000**  
ON EACH MILLION OF CAPITAL  
AND SHALL RECEIVE A DIVIDEND  
OF TEN PER CENT, ANNUALLY, OUT  
OF THE NET EARNINGS OF THE  
CORPORATION, AND THEN

**\$25.**

**THIS PREFERRED STOCK**  
SHALL  
SHARE IN ANY FURTHER  
DIVIDENDS AFTER THE COM-  
MON STOCK HAS RECEIVED A  
DIVIDEND OF TEN PER CENT,  
ANNUALLY BOTH KINDS  
EQUALLY.

## A 10 Per Cent Stock for \$25.00 a Share.

### DIVIDEND PAYABLE QUARTERLY.

Think of it,—this Stock will no doubt pay its Owners 50 Per Cent a Year.

#### WE REFER, BY PERMISSION, TO A FEW OF OUR STOCKHOLDERS:

MRS. M. E. YOUNG,	-	-	-	Cambridge, Mass.
F. L. MERRICK,	-	-	-	Springfield, "
MISS ISABELLA L. GRAY,	-	-	-	Stonclan, "
MRS. C. E. HOLMES.	-	-	-	"
MISS M. E. BERNEY,	-	-	-	Brooklyn, N. Y.
ALEX. A. PETTIGREW,	-	-	-	Gloucester, Mass.
DANIEL F. SHEEHAN.	-	-	-	Lawrence, "
HERBERT HANSON,	-	-	-	Gloucester, "
MISS M. A. BERNEY,	-	-	-	Charlestown, "
MRS. H. DUTTON,	-	-	-	"
JULIUS WOLFF.	-	-	-	Boston, "
NATHAN DAVIS,	-	-	-	Groton, "
ASA WELLINGTON,	-	-	-	Quincy, "
DAVID BURHARDT,	-	-	-	North Troy, Vermont.
B. WILKINSON,	-	-	-	Boston, Mass.
MISS C. C. WOODARD,	-	-	-	Stoneham, "
MISS S. T. BENNETT,	-	-	-	Boston, "
MISS S. M. SKINNER.	-	-	-	"
E. R. MORRISON,	-	-	-	"
MRS. E. CLARK,	-	-	-	"
MISS L. A. LORING,	-	-	-	"
MRS. J. L. WHITE,	-	-	-	"
C. A. WILSON,	-	-	-	Gloucester, "
C. E. SAMMONS,	-	-	-	Chelsea, "
JOHN A. CARR,	-	-	-	Boston, "
N. C. JAMESON,	-	-	-	"

MISS J. M. BERNEY,	-	-	-	Williamsburg, N. Y.
J. H. HATER,	-	-	-	Boston, Mass.
B. DUTTON.	-	-	-	Boston, Mass.
D. WILLIAMS,	-	-	-	"
J. TABOR,	-	-	-	"
MRS. F. LUCAS,	-	-	-	"
A. T. SMALL,	-	-	-	Holbrook, Mass.
MRS. H. KIMBALL,	-	-	-	Chicago, Illinois.

And many others who have from four to one hundred shares each.

We desire the reader to inquire of any of the above persons, for all of them are personally acquainted with the officers and directors of the Company, and to impress on the minds of all who wish to invest in this stock, that the majority of this stock is held as trust funds for a solid, permanent and sure investment, for no other Company can pay such enormous dividends as this will.

### 10 Per Cent is Guaranteed,

and even 50 per cent, the directors believe, will be a common dividend, for our patents are being extended all over the world.

**INQUIRE, INVESTIGATE AND EXAMINE, AND YOU WILL SURELY  
INVEST ALL THAT YOU CAN SPARE IN**

## The Globe Company.

Make all Checks, Drafts, Postal Orders, &c., payable to the order of

**GEORGE E. DUTTON,**

*Secretary.*



# TO RAILROAD OFFICIALS.

*Do you desire to Save your Fuel? To have your Locomotives run Clean, and at One-Third of the expense for Coal or Wood?*

IF SO, TRY THE

**BERNEY**

## SPARK CONSUMER AND SMOKE PREVENTER

PATENTED IN AMERICA AND EUROPE.

**APPLIED, IF NECESSARY, IN 24 HOURS, at an expense for Castings and Labor of LESS THAN \$150.00.**

**Royalty, \$300 for Spark Consumer, or \$500 for Spark Consumer and Smoke Preventer, for each Locomotive.**

The only practical inventions in the world to do the work as stated. Will last as long as the Locomotive.

As our orders are far ahead of our present facilities to make the Stacks, the orders will be filled as they are received: First come first served.

[From the Chicago Tribune, July 21, 1880.]

### THE SMOKE NUISANCE.

The movement to abate the coal-smoke nuisance is becoming general in this city, and it is high time. Steps to this desirable end would have been taken long ago but for the prevailing belief that it was impossible to stop the besmearing and befouling nuisance; but, since it has been amply demonstrated that it can be abated, the public demand for its suppression grows in intensity. The parties who offer the most resistance are the railway companies. They rest their objection on the grounds of impracticability. They admit, however, that careful and intelligent firing will greatly reduce the vast volumes of dense black smoke emitted by their engines within the city limits. But there will be no systematic effort to enforce careful stoking unless there is an ordinance forbidding the smoke nuisance under penalty. Such an ordinance, with the Health Department charged with the duty of enforcing it, will impel the railroad people to employ intelligent and vigilant efforts to mitigate if not totally abate the nuisance.

The rendering and other stink factories declared some years ago that the offensive odors their establishments produced were impossible of suppression, and that if the city authorities prosecuted them severely their business would be broken up, and enormous pecuniary loss would be inflicted upon them. But the city insisted that the stinks must be suppressed, and they were suppressed, and the rendering business was neither crippled nor killed, but prospers and flourishes. So it will be with the coal-smoke nuisance, when the City Council passes the proposed ordinance, and the Health Department proceeds to enforce it. The head of that Department is a scientific man, fair in his actions, clear in his judgments, and who will do nothing rashly or maliciously; nor will he demand impossibilities; but he will work away at the problem, persevering until he clears the atmosphere of Chicago of the grimy clouds of coal smoke that now so greatly annoy its inhabitants, and injure their health and habitations.

Some of the objections of the railroad men are without foundation. For example, that the ordinance would force them to cease burning Illinois coal on their roads. The ordinance does not apply to smoke generated outside of the city limits, and there is surely nothing impracticable in using coke within the city limits. A few bushels can be carried on each locomotive to be consumed while the engines are passing in and out of the city. This is done in all cities in Great Britain, and, we believe, on the Continent of Europe. The difference in the cost of such fuel burned by the engines in the city would be a very trifling matter when compared with the benefit the public would derive therefrom. The switching engines create a great deal of almost unbearable nuisance; why should not they be fed upon coke, and their torrents of black, choking, sulphurous smoke, be abated at once? Some of the railroad engineers interviewed expressed the opinion that the "Berney apparatus," now so successful

on the Old Colony Road in New England, would prove a failure if applied to Illinois coal; but they do not know this to be a fact; none of them have yet tried it. They therefore speak without actual knowledge. Let them invite Berney to come here and attach his device to a few locomotives, and see whether or not it will consume the smoke of Illinois coal. It will be soon enough to pronounce against it after it has been fairly and fully tested. If it succeeds in doing here what it does in Boston, it will not only free this city from the smoke, spark and cinder nuisance caused by a thousand locomotives running to and fro all over Chicago, but it will save the companies large sums in the item of fuel and in damages from fires caused by sparks; and it will be a most grateful deliverance to the travelling public from the pest of smoke in their faces and cinders in their eyes, ears, hair and clothes.

Col. Berney did go to Chicago, and all the good people of that city were kindly informed that so far as smoke was concerned he failed. But the real facts were that the Colonel did not have his inventions covered with patents,—that is, the plans that would prevent Illinois coal from smoking; he preferred that it should be announced as a failure than show his hand until his rights were all secured in America, Canada and Europe, and very few men would have had the moral courage to turn their backs on a city of half a million of people, who expected him to burn all the smoke of the locomotives, tugs, etc.

The 29th of Aug., 1880, Col. Berney left Chicago. Sept. 20th, less than a month, he arrived at the Howard House, Washington. Let the official notices from the Patent office state the rest:—

DEPARTMENT OF THE INTERIOR,  
ISSUE DIVISION, U. S. PAT. OFFICE,  
WASHINGTON, D. C., Sept. 23, 1880.

Sir:—Your application for re-issue of Patent No. 163,363 for improvement in SPARK ARRESTERS FOR LOCOMOTIVES has been examined and allowed.

Serial No. 14, Sept. 23, 1880. FOR CIRCULATORS IN STEAM BOILERS.

Serial No. 17,488, Sept. 25, 1880. FOR SPARK ARRESTERS.

Serial No. 17,578, Sept. 28, 1880. For Heating and Circulating Water in Boilers.

Serial No. 7, 11, Sept. 28, 1880. Inserting Tubes in Boilers.

Serial No. 17,776, Sept. 29, 1880. For Grate Bars. Serial No. 17,646, Sept. 29, 1880. For Spark Arresters and Consumers.

Serial No. 17,654, Sept. 29, 1880. For Spark Arresters and Smoke Consumers.

Serial No. 17,639, Sept. 30, 1880. Smoke-Preventing Furnace.

Serial No. 17,964, Oct. 1, 1880. Saddles and Stacks (for Smoke and Spark Consumers).

Serial No. 17,963, Oct. 1, 1880. Smoke-Consuming Furnace.

Serial No. 18,100, Oct. 7, 1880. Spark and Smoke Consumer.

Serial No. 18,173, Oct. 9, 1880. Steam Mufflers. All have been examined and allowed; on payment of final fees the patents will be issued.

M. E. MARBLE, Commissioner of Patents.

Twelve patents in twenty days, embodying sixty claims, also five more to be applied for, prove that something had been invented. The statements below will prove whether the inventor believed in his work:—

THE GLOBE CO.'S SHOPS, 83 HAVERHILL ST.,  
BOSTON, MASS., Nov. 18, 1880.

The pattern makers employed at these shops have made entirely new and costly patterns for Col. Berney's new Spark Consumer and Smoke Preventer. In a simpler form castings were sent to the Cumberland & Pennsylvania Railroad, and they have proved, by the letters from the Master of Mechanics of that road, a perfect success every way. I have no doubt of it.

G. W. HOLMES, Foreman.

CUMBERLAND & PENNSYLVANIA R. R.,  
MT. SAVAGE, MD., Nov. 14, 1880.

Dear Sir:—I feel that I cannot speak too highly of Berney's SPARK AND SMOKE CONSUMER. In the first place, it is correct in principle and mechanical in application, positive in its results. It does all they claim for it, returning 95 per cent. of the Sparks back to the fire-box. THEIR NEW PROCESS OF BURNING THE SMOKE IN THE FIRE-BOX WITH HOT AIR IS VERY GOOD,—YOU ARE NOT TROUBLED WITH VOLUMES OF SMOKE, RUNNING, OR AT STATIONS. I am sure it is the best Spark and Gas Consumer in the market. I am now using it on our passenger engines, burning fine, soft, bituminous coal, with grades 163 feet to the mile. Our engines steam just as well, if not better, USING A GREAT DEAL LESS COAL. IT CAN BE PUT ON ANY ENGINE IN 24 HOURS. I must say, it is a positive preventive from fires along the road, even in the driest time. I should feel perfectly safe in hauling hay or cotton in open cars with these Stacks. I am sure you could not do better than adopt the Berney Stack. I have tried them all. I would agree to run one of our engines 200 miles with any engine using the EXTENSION SMOKE-BOX 10 miles, and not have as many Sparks on the platforms by one-half. Hoping I have answered your inquiries, I am

Yours very respectfully,

N. W. HOWSON,  
M. of M., C. & P. R. R.

The above is a copy of a letter sent by Mr. Howson to another Master Mechanic, and was sent by the receiver to the Globe Company. We need no further recommendation, and yet Mr. Howson has not our PARAGON STACK that is destined to revolutionize spark and smoke burning.

Mr. Howson writes to Col. Berney Nov. 13, 1880:

"I have examined your drawing of new Stack, but allow me to say that what you have HERE is all you want. It does the work, and that is enough."



Presented by THE GLOBE COMPANY, BOSTON, MASS.

CAPITAL, \$1,000,000. pay 10 Per Cent. Dividends Quarterly. SHARES, \$25 EACH.

THE GLOBE PERPETUAL ALMANAC.

EXPLANATION. Look at the top for the century; then to the right or the left for the year; and in a line with that, directly under the century, is the Dominical Letter for the year. Under the given Dominical Letter in the lower part of the table, find the day of the week, and in a line with it, in the calendar, you have the day of the month.	TEN PER CENT. A YEAR RETURNS THE CAPITAL IN TEN YEARS. TIME IS MONEY.										CENTURIES.										THE TIMES ARE CHANGED, AND WE ARE CHANGED WITH THEM. FORTUNE FAVORS THE ENTERPRISING.										EXPLANATION. N.B.—Every Leap-Year has two Dominical Letters; the latter only is designated in this table, as the first serves only till the close of February: e.g., 1848 has B. and A. At the beginning of every century Leap-Year is omitted, except every fourth century—1600, 2000, etc., being Leap-Years, and the intervening three centuries exempt from the common rule.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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DOMINICAL LETTERS.

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17	24	31			14	21	28		4	11	18	25	2	9	16	23	30		Tues	Mon	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	6	13	20	27	3	10	17	24	31	7	14	21	28	
18	25				15	22	29		5	12	19	26	3	10	17	24	31		Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	7	14	21	28	4	11	18	25				
19	26				16	23	30		6	13	20	27	4	11	18	25		Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	8	15	22	29	5	12	19	26				
20	27				17	24	31		7	14	21	28	5	12	19	26		Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	9	16	23	30	6	13	20	27			
21	28				18	25			1	8	15	22	29	6	13	20	27		Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	10	17	24	31	7	14	21	28	4	11	18	25				
22	29				19	26			2	9	16	23	30	7	14	21	28		Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	11	18	25	1	8	15	22	29	5	12	19	26			
23	30				20	27			3	10	17	24	1	8	15	22	29		Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	12	19	26	2	9	16	23	30	6	13	20	27		
24	31				21	28			4	11	18	25	2	9	16	23	30		Tues	Mon	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	1	8	15	22	29	5	12	19	26					
25					22	29			5	12	19	26	3	10	17	24	31		Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	2	9	16	23	30	6	13	20	27			
26					23	30			6	13	20	27	4	11	18	25		Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	3	10	17	24	31	7	14	21	28			
27					24	31			7	14	21	28	5	12	19	26		Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	4	11	18	25	1	8	15	22	29		
28					25				8	15	22	29	6	13	20	27		Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	5	12	19	26	2	9	16	23	30	
29					26				9	16	23	30	7	14	21	28		Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	6	13	20	27	3	10	17	24	31
30					27				10	17	24	1	8	15	22	29		Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	7	14	21	28	4	11	18	25
31					28				11	18	25	2	9	16	23	30		Tues	Mon	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	Sun	Sat	Frid	Thur	Wed	Tues	Mon	8	15	22	29	5	12	19	26



# 10 Per Cent. Dividend Paid Quarterly

ON THE FIRST DAYS OF

February, May,

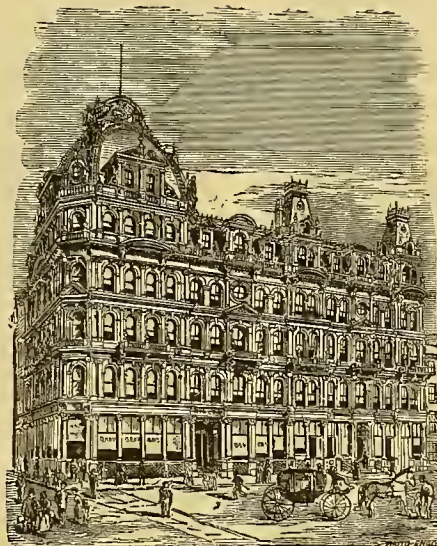
August, November,

— BY THE —



**COMPANY,**

Hartford, Conn.



[RIALTO BUILDING.]

— BY THE —



**COMPANY,**

Hartford, Conn.

At their Office, Rialto Building, 131 Devonshire St., Boston, Mass.;  
or Post Office Orders or Checks Sent Anywhere.

## STOCK, \$25. PER SHARE.

DON'T FAIL TO SECURE SOME OF THESE SHARES.

A GOVERNMENT BOND PAYS BUT 4 PER CENT. WE PAY 10 PER CENT. ON THIS STOCK, and this Stock will go up to \$200, or more, within a year. Any 10 per cent. Stock of Banks, Railroads, or Manufacturing Companies, is worth from \$160 to \$200 a Share. Our Company is young yet, but it pays more dividends than the average of old companies.

What is more true than "NOTHING VENTURE, NOTHING GAIN?" BUT IN THIS CASE IT IS NOT A RISK, IT IS A CERTAINTY.

**JOSEPH KELLY, President.**

**GEO. E. DUTTON, Secretary.**

**A. B. CURRIER, Treasurer.**

**ASA WELLINGTON, Counsel.**

**A. BERNEY, General Manager.**

### DIRECTORS.

A. B. PUTNEY, of Boston,  
A. PETTIGREW, of Gloucester,  
JOHN A. CARR, of Boston,  
H. WONSON, of Gloucester,  
A. WELLINGTON, of Quincy,  
J. B. WILLIAMS, of Boston,

EZRA MILLER, of New York,  
A. BERNEY, of Boston,  
A. T. SMALL, of Holbrook,  
O. L. YOUNG, of Cambridge,  
H. P. STEVENS, of Boston,  
N. A. DUTTON, of Boston,

G. E. DUTTON, of Boston,  
JOSEPH KELLY, of Providence,  
WM. CURRY, of Boston,  
B. DUTTON, of Charlestown,  
NATHAN DAVIS, of Groton.

The Company will have their business, for convenience and profit, divided into Branches, as follows:—  
Northern Division at Montreal, Canada; Southern Division at Atlanta, Georgia; Eastern Division at Boston, Mass.; Western Division at Chicago, Illinois; European Division at London, England, and others hereafter, as our patents cover the Globe.



# REASONS WHY

## A MAN INVESTED IN THE GLOBE COMPANY.

PARKER HOUSE, BOSTON, MASS., Nov. 29, 1880.

*My Dear Wife:*—I enclose your certificate of The Globe Company for forty shares of Preferred Stock, at \$25 each, making the \$1000 you wanted invested in the best paying and safest security I could find in Boston.

On my arrival here I found that Government Bonds were very high, and only paying 4 per cent.; that any good railroad shares, paying even 6 per cent., were selling at \$125,—the Boston & Albany R. R. at \$163; Savings Banks paying only 4 per cent. interest. Hearing of other Stocks I examined several, and finally arrived at THE GLOBE COMPANY'S offices, in one of the finest buildings in the city, directly opposite the Post Office. Entering a beautiful marble hall, on one side was the Elliot National Bank, on the other the Pacific National Bank, with whom The Globe Company deposits its cash. Above them I walked into the offices of THE GLOBE COMPANY. They were carpeted with Brussels carpets, and furnished with substantial black walnut chairs, desks, tables, and a large steel safe; many engravings of locomotives, and other machines, adorned the walls.

In the first one is located a fine, portly old gentleman,—Judge Wellington, the Counsel of the Company, who looks after the legal affairs of the Company. In the next, I saw the Treasurer, Allen B. Currier, Esq., who has a large hat and cap store at 709 and 711 Washington Street, Boston. Mr. C. devotes a few hours a day to the financial welfare of the Corporation, with all the power that lies in him. In another office, the General Manager, Col. A. Berney, was engaged with the President, Joseph Kelly, Esq., a noble looking gentleman about sixty years old, upon whose face God had written in unmistakable language, "Here is my noblest work—an honest man." Mr. K. is a railroad official of 26 years' service. The Secretary, George E. Dutton, was busy, with his assistant, sending off numerous pamphlets and letters. Every one was busy.

The President inquired my business, begged me to be seated, which I did, and I told him I came to inquire as to THE GLOBE CO.'S STOCK. "Well," said he, "any questions you desire to ask I will cheerfully answer." I told him I desired to know all about it. "Well," said he, "then I will tell you all.

### OUR COMPANY

was chartered May 22d, 1879, and is unlimited as to time. Its Capital is \$1,000,000, of which \$100,000 belongs to the Company, in the shape of

### TREASURY STOCK.

This Stock is sold for a cash capital, at par, and never less, under any circumstances.

### We pay 10 per cent. dividends,

or interest, quarterly, in cash here, or send it in checks, postal orders, or by express, all over the United States or Canada.

### As to the certainty of these dividends continuing or increasing,

let me tell you how we do our business. We own or control the monopoly of the only practical way of preventing smoke and sparks from locomotives all over the world; and as there are over 100,000 of them, this will pay us the enormous sum of \$30,000,000. Now, supposing that we only fitted one-third of them, that would be \$10,000,000.

### But this is not all.

The Smoke Preventer we charge \$200 extra for; then there are the furnaces, steamships, boats, tugs, etc. So you see that we can and will make immense sums of money.

### Will the Railroads put them on? Certainly.

Our counsel has given his written opinion that they will be compelled to by law, and here is what he states:

*Persons using furnaces with stacks are bound to use such appliances as will, as far as possible, prevent the emission of sparks and smoke to the annoyance of others, and they are liable for nuisance if they fail so to do.*

*Railroad Corporations are common carriers, and, as such, they are by law bound to provide, by all suitable means, for the safety, comfort and convenience of passengers; they are bound to make use of such appliances as will secure to passengers, as far as possible, pure air, quiet, and freedom from the annoyance of sparks and smoke.*

### But we prefer to appeal to their self-interest,

for we can save enough fuel in six months to pay for all charges by us,—royalty and mechanical expense. We NEVER fail to save the coal, make steam, or do all we say we can do.

### Now, as to our expenses.

OUR SHOPS earn all they cost to run. Our income is continuous, without any expense, except for the first engine.

### We shall extend the work all over the globe,

and at London, England, we shall have a branch office in January; in Montreal, Canada, in February; in Chicago, Ill., in March; in Atlanta, Ga., in April; and as much sooner as we can. We only lack ready money, and this is now coming in fast.

### But a few shares more of the Treasury Stock remains to be sold.

As to the stock held by the original holders, they keep it as an investment. I know that over half the Stock is not to be sold for years to come.

### As a solid investment

it cannot be equalled. Why, Mr. Berney and myself have been at these inventions for eight years, and expended thousands and thousands of dollars before the inventions were perfected. Mr. B. never faltered; and, under all kinds of discouragements, went on to triumph. These letters prove it:

CUMBERLAND & PENNSYLVANIA R. R.,

Mt. Savage, Maryland, Nov. 23, 1880.

A. BERNEY, Esq., General Manager:

Engine 27 is out; works perfect. Steamers splendid, runs clean, light on fuel; Smoke Preventer is perfect,—nothing can compare with it. President Mayer, General Superintendent Burwell, and Master of Machinery, are satisfied and surprised.

Z. P. BURHARDT, Chief Engineer Globe Co.

CUMBERLAND & PENNSYLVANIA R. R.,

Mt. Savage, Md., Nov. 24, 1880.

COL. BERNEY:

You have the best Spark and Smoke Consumer in the world, with none to beat it. It is a perfect piece of work in every particular. There is not a railroad in this or any other country but what must have it, and will have it at any price.

N. W. HOWSON, M. of M, C. & P. R. R.

With such facts as engines on a railroad at work doing as above stated, we know railroad companies will put them on."

"But, Mr. President," said the General Manager, "you have said nothing about our locomotives for burning anthracite coal dust. You know I consider them the most valuable of any of them. That smoke and spark consuming will not pay this Company as much as the dust will."

"Why, sir," said he, turning to me, "when I inform you that there is more coal dust dumped to waste in Pennsylvania than would be required to furnish fuel for every locomotive in the United States, and that our Company has the sole control of the patents to burn it, you can see at a glance that we have the field all to ourselves. Tell me of a company that has paid 10 per cent. dividends from its net earnings in two months after commencing business, or one that can show contracts and facts that will continue the 10 per cent. Show me a company that its owners voluntarily and unanimously decide that, as long as it runs, \$250,000 shall have the 10 per cent. sure, even though \$750,000 never does. But, mark my words," he said, in a voice of one who seems inspired, "we will pay from 10 to 50 per cent. in 1881, and for years to come.

### OUR BOARD OF DIRECTORS

are all business men, clear-headed. Our officers work for low salaries. Our expenses are carefully kept down to the lowest point consistent with good management.

### We do not owe a dollar. We cannot run in debt. Our Charter and By-Laws forbid it.

Over half of this Stock is held in trust as an investment for orphans, and cannot be sold. If we, who have spent our time and money for eight years, are not afraid of its paying, why should you be?

One stormy evening, as I stepped into the costly steamer "Providence" from the Old Colony Railroad to go to New York, I said to Capt. Simmons, "will you dare to sail to-night?" Said he, "yes, sir." The next morning we arrived in New York. I felt if the Captain would risk his life, the passengers and crew, and the million dollar boat, I could not see any reason why I should not go. So I say to you, if we spend our lives and money, and we run the ship carefully around the globe, enriching all who embark with us, you can afford to go."

I had no more to say; for, as the Manager truly said, I never saw such a prospect for making money, and doing good; and in a few months the people will wonder why they did not invest in The Globe Company's Stock, which you see is neat, and signed by the President, Secretary and Treasurer.

At the request of the officers I went to the Old Colony R. R. Round-House, South Boston, and there was shown over twenty splendid locomotives, all equipped with Mr. Berney's old invention; yet that was spoken of in high terms by the engineers, firemen, and Mr. Taylor, M. M.

I only hope that all the railroads our way will soon put them on, so that travelling will not be such a nuisance.

Your affectionate husband,

ARTHUR B.

## IS IT MY DUTY

### To invest some money in THE GLOBE COMPANY, of Boston, Mass? Is the thought often revolving in many a man and woman's brain?

We, the Company, say, YES, IT IS YOUR DUTY. FIRST—Because your capital furnishes means to develop great and meritorious inventions that will pay you more interest than any other investment that you can make.

Doubt is often expressed as to the feasibility or propriety of men and women investing in stock companies. We say to all, examine for yourselves into any company that invites you to deposit your dollars for their stock. Then, if satisfied, it may as well be invested in such sound companies as THE GLOBE COMPANY, as in savings banks that pay a very low rate of interest.

When we are requested to explain why we can pay Ten (10) per cent. dividends upon our Stock, we can easily do it. For the purpose of procuring money to carry out the grand plans of the Company,

### \$100,000 Worth of the Stock

was placed in the treasury to be sold for working capital. The proceeds of its sales are used to push the business. Part of this Stock was declared

### Treasury Preferred Stock,

and should be paid a dividend of 10 per cent. previous to any other Stock receiving a dividend, as long as the Company existed, and for all dividend purposes up to 10 per cent. The holders of that Stock need not care what the capital of the Company is, or what other Stock is Preferred Stock. THE TREASURY STOCK is first, always, to receive dividends every quarter.

### The Earnings of the Company

are almost net earnings. Those who use our inventions pay royalties. That is, after a trial on a railroad and the acceptance of the license, the Company receives not less than \$300 for each and every Spark Consumer, and that is divided among its owners.

Call and investigate for yourselves, or write.



## OBJECT OF THE COMPANY.

The Corporation was established with a broad and liberal Charter, to purchase and develop any new inventions of merit and profit. The incorporators and directors are intelligent, far-seeing business men. They saw the want of a Grand Company, to bring CAPITAL and INVENTION together; and this they have done, and will do, by purchase or contracts. The Corporation will introduce any great invention, as they are now doing with the present inventions, which will be so beneficial to the public and all interested.

It is a well-known fact that about seventy-five (75) per cent. of the fuel used for Railroad Locomotive Boilers is lost by radiation, using cold water, lack of circulating apparatus, waste steam from safety valves, and, most of all, about fifty-five (55) per cent. is sent out of the stack in the form of GREASY BLACK SMOKE that smears the clothes and skin of the passengers and employes, ruins the varnish, paint, plush and fixtures of the cars, annoys the dwellers along the line of the railroads, and sickens the weak and worries the well with its vile smelling, unhealthy sulphurous gases. Its red-hot coals, called sparks, destroy, annually, hundreds of thousands, even millions of dollars worth of property, and torment the passengers by filling their eyes, hair and clothing with the dirt. Thousands of tons of coal are thus wasted in the most injurious manner.

All this can be prevented by the Company's inventions, and at least one-third of the fuel saved.

The expense for work and materials is but about \$150, and will be kept in order by the Globe Company 10 years for \$50, each, extra.

OUR COMPANY HAS A CHARTER THAT IS STRONG, AND CAN LAST AS LONG AS DESIRED. The main points will be, economy in expenditures, vigilant and prompt attention to details. Low salaries will be the rule, as the principal officers are the largest interested.

The fact that the most of the stock is held as an invested capital by families, not to be sold at any price, is one of the best guarantees to insure the other owners that their interests will not be swamped by speculators.

The management believe in the invention, and have a pride in having it adopted in all its perfection.

The great profit to be made by the practical use of them by railroad companies, will cause them to be eagerly sought for.

The Company will soon have its agents travelling all over the country, and its own locomotive and open car running to show how clean and economical one can be run. The public will then insist upon their being used, by legal enactment.

*But the Corporation is not confined to one or two inventions, but have under consideration the purchase of others as valuable.*

THIS STOCK IS AS PERMANENT AS ANYTHING CAN BE. THE PREFERRED STOCK IS ONLY ONE QUARTER OF THE CAPITAL, and must receive 10 per cent. interest before the Common Stock can receive a cent of interest.

## COPY OF THE STOCK.

Capital Stock, \$1,000,000.

ORGANIZED UNDER THE LAWS OF CONNECTICUT.

Shares, \$25.00 Each.

## THE GLOBE COMPANY.

No. 1000.

[SEAL.]

FULLY PAID UP AND FOREVER UNASSESSABLE.

[STATE ARMS.]

.....Shares.

Boston, Mass.,.....188 .

*This is to Certify that.....entitled to*

.....Shares of the Capital Stock of

### THE GLOBE COMPANY,

fully paid up by and issued in payment for property deemed essential to the prosecution of the business of the Company, as per Certificate filed in the office of the Secretary of State for Connecticut, transferable only on the Books of the Company, either in person or by Attorney, on the return of this Certificate.

THIS IS PREFERRED STOCK, And is limited to \$250,000 on each million of capital, and shall receive a dividend of ten per cent annually out of the net earnings of the corporation, and then



#### THIS PREFERRED STOCK

Shall share in any further dividends after the common stock has received a dividend of ten per cent annually, both kinds equally.

*In Testimony Whereof the said Company has hereunto affixed its seal and caused this Certificate to be signed by its President, Secretary and Treasurer.*

.....Secretary. ....Treasurer. ....President.

GEORGE E. DUTTON, Treasurer.

ALLEN B. CURRIER, Secretary.

JOSEPH KELLY, President.

## CHARTER OF THE GLOBE COMPANY.

ARTICLE 1.—The name of said Corporation shall be THE GLOBE COMPANY.

ARTICLE 2.—The capital stock of said Company shall be one million dollars (\$1,000,000), and the capital stock shall be divided into ten thousand shares, of one hundred dollars each.

ARTICLE 3.—The purposes for which said Corporation is formed are the following:

A. To buy any letters patent in this or any country, to re-issue and extend the same when necessary.

B. To manufacture goods or articles of any kind, patented or not.

C. Furnish capital to manufacture any patent goods.

D. To license any person or persons, corporation or corporations, to use any patents owned by the Company.

E. To use all lawful means to extend, sustain, defend and strengthen patents owned by the Company.

F. To buy, sell, own and deal in real or personal property for the prosecution of said business, and generally to do all things incidental to said business, and to the management thereof.

G. Patents once owned or controlled by the Company shall not be sold or assigned, except by two-thirds vote of all the stock.

ARTICLE 4.—The amount of the capital stock actually paid in is one million dollars, and is based upon and fully paid by certain valuable rights secured by assignment to the Company, and in payment for which said stock is issued.

ARTICLE 5.—One-tenth of the whole capital stock shall be reserved to be sold for capital, or to be used for the best interest of the Company whenever a majority of the board of directors may deem it expedient to dispose of any part of the same.

ARTICLE 6.—No debts shall be contracted for more than there is actual money in the Treasurer's hands to pay for the same.

AMENDED NOV. 4, 1880, by making the Stock into 40,000 Shares, and the par value \$25. each Share.

#### A SPECIAL MEETING OF THE STOCKHOLDERS

of the Globe Company (which owns Berney's spark, smoke, gas and steam consumer) was held at 131 Devonshire street last week. There was a full attendance, President Kelley in the chair. A report was made of the progress of the company, which was satisfactory to all present. The new patents, further perfecting the invention, were shown, and numerous contracts with railroads who have adopted the invention and are now using it were exhibited. Letters from master mechanics of railroads, showing that the invention was exactly what was needed, were read, and demonstrated that the claims of the company, that this invention consumes the sparks and smoke, and saves a great deal of fuel, paying its cost over several times in a year to any railroad company using it, were sound. Some of the stockholders, who were exceedingly gratified with the regular quarterly dividends of 2½ per cent. which are now being paid, investigated that question thoroughly, and found that the company had contracts to warrant still bigger dividends. A proposition to make the par value of the stock \$25 a share, keeping the same relative capital, was proposed and unanimously adopted. The stockholders were not only pleased with the condition of the company, but so well satisfied that some of them subscribed for additional stock and are sending in their friends to secure a block. The closer this stock is investigated the more clearly does it show that it is a sound investment and one which is on a sure dividend-paying basis.—Boston Herald and Globe, Nov. 8th, 1880.



# GREAT INVENTIONS PAY.

From Editorial of The Boston Herald, October 19, 1880.

"SIR HENRY BESSEMER, the inventor (who received his knighthood for his invention), has been presented with the freedom of the city of London. Sir Henry converted cast-iron into steel in twenty minutes, reduced the price from \$300 to \$35 a ton, and increased the production from 51,000 to 1,000,000 tons a year, saving in the life of one set of steel rails more than \$850,000,000 for Great Britain alone, besides the increased safety and comfort to the passengers. *And yet this change was not an easy one to bring about.* Mr. Bessemer (as he was in those days), *tried for a long time to get steel makers to use his method, and could not make them believe it was for their advantage to go to a trifling expense to make steel as he proposed. Failing in this, very much against his inclination he formed a company to manufacture Bessemer steel. The success of this enterprise was phenomenal. Its profits, as might be supposed, were prodigious, and after a time the works, (or stock) were sold at TWENTY-FOUR TIMES AS MUCH MONEY AS THEY ORIGINALLY COST."*

The above is but a small portion of the editorial.

But few men have made money more surely and rapidly, than stockholders in companies that control valuable patents.

**THE AMERICAN SCREW COMPANY OF PROVIDENCE, R. I.**—Some years ago, a patent was granted for making a gimblet screw point to a common screw. That stock was sold at \$25 a share, and even less, and went up to \$8,000 a share. A grocer took some shares from his debtors, who had it, threw them on his wife's lap, saying, "Here Mary, I will give you this stuff." In three years reverses came, and for over thirty years his family have been supported in luxury, and are now millionaires, all from that stock in the American Screw Company.

**Shares in the UNION CHEMICAL WORKS, of Jersey,** went up in nine months to \$16,250 a share, and sold for cash, and was held at that price 15 years, paying dividends on that valuation. Letters patent was the property that was bought at those enormous figures in 1862.

**THE AMERICAN TURPENTINE COMPANY of New York,** owned Letters Patent for distilling Turpentine out of stumps. This patent was bought in 1863, for \$50,000, for cash; and it was known that the patent would be good for nothing after the war ended, yet the stock of the company was \$5,000,000, and sold at \$100 a share—\$300,000 being sold in one day.

**BELL TELEPHONE STOCK** sold at \$17½ a share, went up to \$1100 recently, and its capital stock increased by a special act of the Legislature of Massachusetts to \$10,000,000. Of course the holders of the original stock receive the benefit of all extra dividends of stock.

**WESTERN UNION TELEGRAPH COMPANY.**—This stock has been multiplied, at least four times, without a cent of cost to the holders, and to-day pays eight per cent. annually to its stockholders, being 32 per cent. interest.

Will **THE GLOBE COMPANY'S** inventions pay that saves over one-third of the fuel, prevents smoke, gases and sparks annoying passengers and the public. A few months ago it was introduced to the public in its crude state; the Directors and Stockholders held their meetings in each others dwellings, the invention unknown.

To-day, three elegant offices, in one of the finest buildings in Boston, accommodate its Officers and Stockholders. Three large shops, filled with tools and materials, supply its many engineers, who are now putting the inventions on.

Orders flow in faster than they can be filled, and branch offices and depots for supplies will be soon established in Chicago and Atlanta, the Western and Southern railroad centres; and in less than four months, one will be fixed at Montreal, Canada, and as soon as possible in the European capitals.

The question is, will it pay to invest a few dollars in a ten per cent. stock, to enable the Company to do their business on a grand scale, so that the stock will pay as well as Bessemer, or better than any other stocks that have enriched their holders. It is but once in a lifetime that such an opportunity occurs. Don't neglect it.

At least \$10,000,000,000 (ten thousand millions of dollars) are to-day invested that does not pay over 4 per cent. interest. We pay 10. It will take 25 years to double capital at 4 per cent., and 10 years at 10 per cent.

But this stock will, we feel assured, pay from 10 to 50 per cent. annually.

The monopoly of the whole world in these great inventions, on a \$1,000,000 capital, speaks for itself.

And the certificate will be returned by registered letter the same day that the order is received. Send full name and Post-office address.

In conclusion, let us here state that there does not exist on the face of this Globe any Company that can pay as much interest for the money invested, or that will be such a blessing to all the people, as this will, to insure a prompt paying dividend to all who purchase the Preferred Stock. *The Board of Directors have unanimously voted, That the Preferred Stock should be limited to one-quarter of the Capital Stock; that it should receive 10 per cent. annually, in quarterly dividends of 2½ per cent., out of the actual earnings of the Company; that the contracts made, and being under negotiation, will alone pay this dividend for years and years to come.*

This is no fancy Stock—it is founded, as its Charter is, to last for years to come—wisdom, prudence, integrity, justice, watchfulness and economy, govern its direction.

No one need fear to invest in its Stock. Many families, whose members are Stockholders and Directors, have every dollar in the Company; widows and orphans' trust funds are freely paid for its Stock.

SPECIMENS OF STOCK mailed to any address, on receipt of stamp.

Send Postal Orders, Checks or Drafts on Boston, for one or more shares, at \$25.00 each.

**ALLEN B. CURRIER, Treasurer,**

**131 Devonshire Street, Boston, Mass.**

Mr. Berney for six long years endeavored to get his inventions tested; but it was only when he formed a stock company that he succeeded, and we believe that this company's stock will be worth as much as the **BESSEMER COMPANY'S**. The use of coal is hourly, it is incessant, and as our patents will cover **THE WHOLE GLOBE**, WHY SHOULD IT NOT PAY PRODIGIOUS DIVIDENDS? In two months of active business it earned enough to pay at the rate of a 10 per cent dividend, and can now pay more than that on its preferred stock.

The Berney inventions will reduce the cost of using coal one-third, as there are 30,000 locomotives using, on an average, two tons of coal or wood a day, which we will place at \$3.00 a ton, there would be an annual saving of \$18,000,000 in the United States alone; this is but a trifle compared with the benefits and comforts of freedom from sparks and smoke, and the millions lost by damages from sparks and smoke in every way.

**GOODYEAR** immortalized himself by vulcanizing Rubber, and left his family very wealthy, giving employment to many thousands in the numerous stock companies.

**HOWE**, with his Sewing Machine, reduced the hard labor of women, gave employment to tens of thousands, and died a millionaire.

**SINGER**, whose monuments are the production of his brain, that is to be found in three millions of homes all over the world, died, leaving \$15,000,000, and one of the most powerful stock companies in existence.

**CYRUS MCCORMICK**, with his Reaper, harvested millions of money, and made it possible to gather in the great crops of the West, to feed the toiling millions of America and Europe.

**RICHARD HOE** invented and made Printing Presses, that excel all others—their ever-revolving cylinders are to be found in every city and town, and by their rapidity, spread forth news, intelligence, educating the people. Col. Hoe left millions of wealth, and a stock company in New York city.

**HENRY DISTON**, of Philadelphia, began to make a few Saws by hand. His enormous manufactory, the largest of its kind in the world, attests the value of his many inventions.

**CORLISS**, of Providence, R. I., devoted his time to the improvement of the Steam Engine. His fame as an inventor, and the liberal reward he has received, attest the value of his efforts.

**THOMAS KINGSFORD**, a poor man, as nearly all inventors are, for the maxim holds, *true necessity is the mother of invention*, invented the machinery to extract Starch from corn. The immense works owned by the Kingsford (stock) Company at Oswego, N. Y., and its prosperity, shows how inventions pay.

**R. P. PARROT**, inventor of his plan of shrinking on wrought iron bands on cast-iron cannon, made an immense fortune from successful inventions, and left his immense works at Cold Spring, N. Y., as an evidence of the value of brains and talent put into inventions.

**ALBERT WEBER**, inventor of his improvements in Pianos, by skill, industry and business tact, left his family millionaires, and his name and fame an honor to America, his splendid instruments to charm and electrify all who hear them. Steinway, Chickering, Bradbury, and others, have their names enrolled as inventors.

**GARDNER CHILSON** improved Stoves to almost absolute perfection, and left a million of money.

**PULLMAN AND WAGNER**—Reader, have you ever rode 2,000 miles in a very common lot of cars, night and day, to see some poor mortal, ere his spirit passed away, or on some errand that could not be delayed? I have, tired and sore have I been at the end of the journey; but thanks to Pullman, Wagner, and others, we can sleep and eat and ride in luxury now. A \$12,000,000 Stock Company rewards Pullman for his toil.

**COL. E. MILLER**, inventor of the Miller Platform Coupler and Buffer, has, through his great invention, saved, and will save more lives and suffering, than any man on earth, and we know what we say. **GOD BLESS HIM**,—a good, kind, generous man, with a soul in him.

**WESTINGHOUSE**, with his Air Brakes, shares with Miller and Pullman, in the honor of making railroad travel safe and comfortable, and we are happy to say, that the great company that bears his name, pays solid dividends.

But we must stop, for we could fill a book as large as the Bible with well-merited notices of thousands of inventors, who have done more to benefit and civilize mankind, than all other classes of men.



# TO RAILROAD COMPANIES.

THE GLOBE COMPANY on this page illustrates the outward appearance of three of their stacks, the fourth being shown on the engraving of the locomotive on page 3. As is here illustrated in the Straight, the Globe and the Diamond; *all these are made of cast-iron, in the best manner, by the POCASSETT IRON WORKS—Henry S. Sterling, Esq., President, Cliff Street, New York—by special contract for this Company; of fine metal and superior to any other foundry.*

## COAL OR WOOD-BURNING STACKS MADE OF STEEL OR IRON.

During the last six months our stacks have been placed on many locomotives on the Old Colony, Central Vermont, Sussex, New York & New England, Cumberland & Pennsylvania, Western and other railroads.

## TO CONSUME SPARKS.

COL. BERNEY has perfected and been allowed nearly twenty patents for his wonderful improvements in locomotive and other boilers and furnaces. The result is, that with the neat stacks herein illustrated every particle of smoke is prevented, when fired as directed.

And THE GLOBE COMPANY herein pledges itself to contract with any Railroad Company, that it will so change their locomotives that they shall.

1. MAKE PLENTY OF STEAM.
2. RUN ENTIRELY FREE OF SPARKS.
3. NO SMOKE TO ISSUE FROM THE STACK.
4. TO PREVENT ALL FIRES FROM STACKS.
5. TO SAVE ONE-THIRD OF THE FUEL.

6. AND FOR ALL THIS, INCLUDING ROYALTY, *they will take the price of fuel saved in one year where coal is \$3.00, or over, a ton, or \$500, cash, for each locomotive fitted up with THE SPARK CONSUMER AND SMOKE PREVENTER.*

We can send plain Spark-Consuming Stacks, same style, or Spark and Smoke-preventing Stacks and appliances.

## THESE STACKS WILL LAST TWENTY YEARS' ORDINARY USAGE.

### For Wood-Burning Locomotives

we can use the old style SPARK CHAMBER STACKS, by fitting on our pipes; but we recommend, on the score of economy, our regular Diamond or Globe Stack, to burn or prevent smoke; they will pay, even where wood only costs a dollar a cord. Passengers do not like the smell of smoke from wood any more than of coal, and in these days of refinement it is time to prevent all annoyances that can be done.

It will pay, be sure of that; thousands and tens of thousands will not travel for pleasure, because there is no pleasure in closed cars, kept so to prevent sparks and smoke out of them. We would call the attention of railroad owners to these facts; for they are facts: and the public will appreciate any efforts made for their comfort.

Send height of Stacks desired, from top of smoke-box or arch; size of cylinders; diameter of smoke-arch; whether for coal or wood; for Spark Consumer, or Spark Consumer and Smoke Preventer combined; style of Stack—Diamond, Globe, or Straight—cast-iron, steel; or wrought-iron.

These Stacks will be sold all fitted up, so that all that has to be done is to fit on the saddle, adjust the Spark Chambers and insert the return flues.

We refer to the following gentlemen, who have Stacks in use on the railroads named below:

- J. R. KENDRICK, Supt. J. K. TAYLOR, M. M., Old Colony R. R., Boston.  
 J. ADAMS, Supt. GEO. A. COOLIDGE, Supt. of M. P., Fitchburg R. R., Boston.  
 JOS. H. WILSON, General Manager. GEO. E. BOYNTON, Supt. of M. P., New York & New England R. R., Boston.  
 E. B. CASE, Supt. E. H. OSBORN, M. M., Sussex R. R., Newton, N. J.  
 THEO. HOUSTON, Supt. EDWARD MINSHALL, New York, Ontario and Western Railway, Middletown, N. Y.  
 O. L. BURWELL, Supt. N. W. HOWSON, M. M., Mount Savage, Md.  
 J. M. FOSS, Asst. Gen. Supt. J. M. FOSS, Supt. of M. P., St. Albans, Vt.  
 S. A. WEBBER, Supt. GEO. W. REYNOLDS, B. C. F. & N. B., Taunton, Mass.  
 TIMOTHY CASE, General Manager. EDWARD OSBORNE, M. of M., Green Bay, Wis.

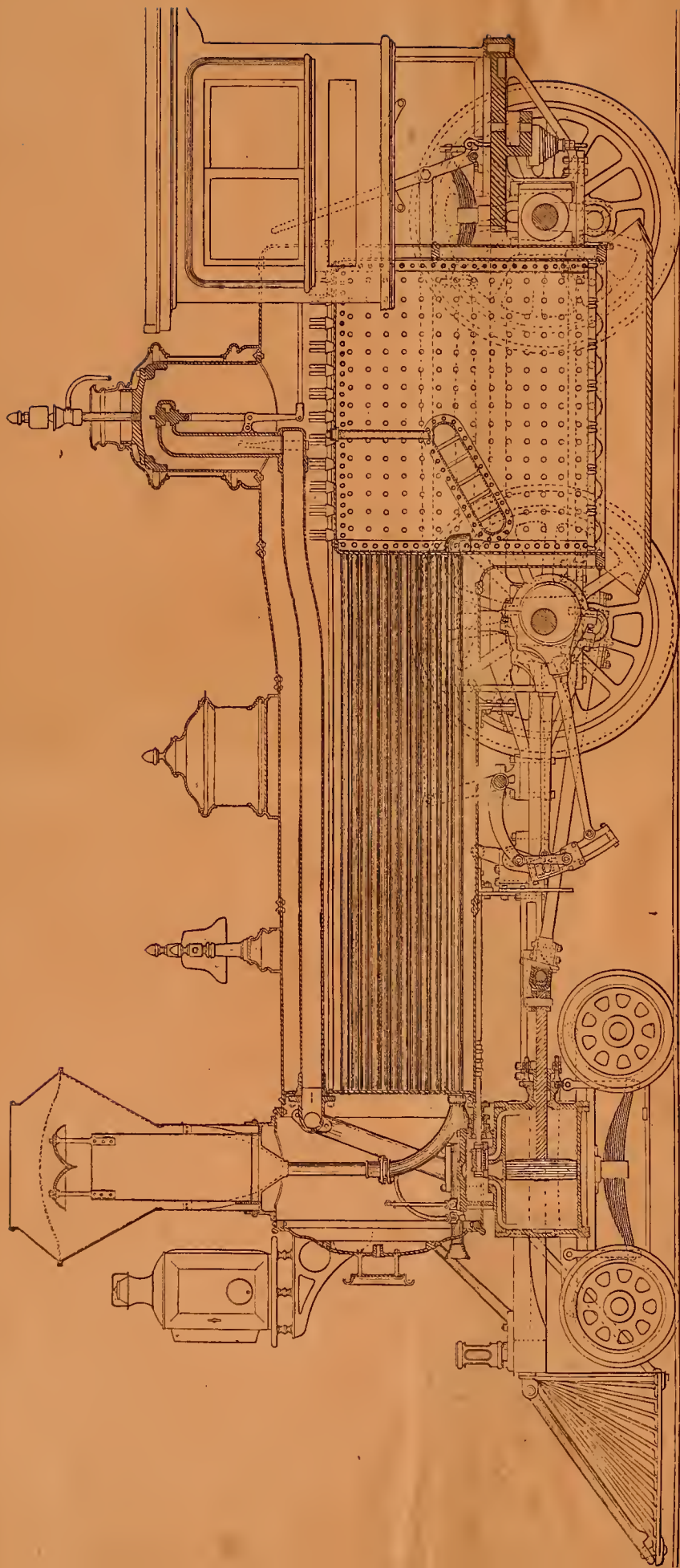
We have orders for the Stacks from railroads in nearly every State in the Union, and cannot get them ready fast enough to supply the orders. It is estimated that it will take acres of shop-room to furnish all that will come from the United States, Canada and Europe.

Drawings sent with instructions. Address,

## THE GLOBE COMPANY,

131 Devonshire Street, Boston, Mass.





#### THE ENGRAVING OF A LOCOMOTIVE

herein shown is a complete copy of a working drawing, by which four were built for the Old Colony Railroad Company, of Boston,—Cylinders 18x24; Drivers 5 feet in diameter,—by James K. Taylor, Esq., M. M.

The Scale of this Drawing is 5-16 of an inch to a foot.

These powerful engines are fitted up with the Berney Spark Consumer, as it was put on them during the year 1880. Simple as it was, it has been made much more so; in fact, entirely changed in its construction and operation, rendering it more complete, and operating even better than the 1880 Stack. The fact that four locomotives can run as clean and economical as stated by the engineers and firemen of the Old Colony R. R. Co., who are hauling, every day, as

#### Large Passenger and Freight Trains

as any railroad in the United States. With them proof is not to be disputed, *because they are facts*, and the same can be demonstrated every hour in the day on more than twenty locomotives on the Old Colony R. R., and on eight other railroads,

#### A MASTER MECHANIC

stated to several other gentlemen, "Mark my words: This Spark Consumer will go into general use; it is not perfect now, but even as it is, no railroad can afford to do without it." The Miller Platform, Coupler and Buffer struggled along for years before it was put on 600 railroads. Now we have a

#### PERFECT SPARK CONSUMER AND SMOKE PREVENTER,

without trumpets or cold air, for which we have, and are allowed, a large number of patents. *We only ask an honest investigation of the merits of our Stacks. Not a Company that has given it a trial has rejected it. It is no hideous contrivance.* It is not encumbered with Spark receivers. It is but a plain, sensible plan, to return red-hot coals to the fire-box, with hot air, that unites with the gases and prevents Smoke.

The wire mesh at the top of the Stack is relieved of the mass of Sparks, which are precipitated down into the chamber by the cone, and the area is allowed for the escape of the steam.

**A Fair Trial will convince anyone of its Economy and Usefulness.**



1

From the Boston Journal  
of January 31st, 1881.

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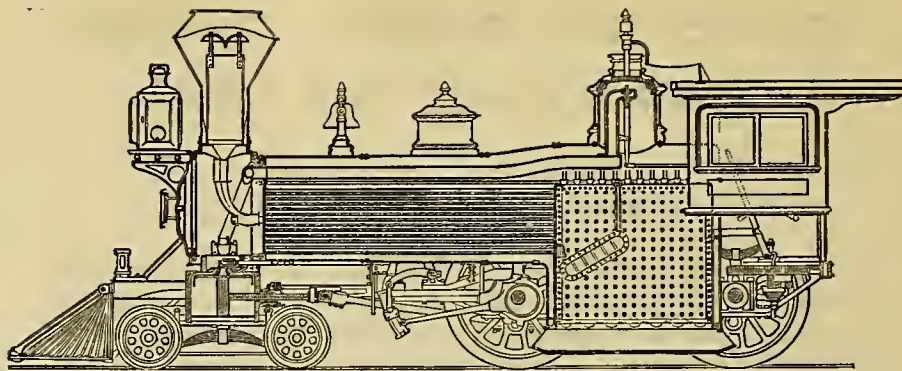
**The Globe Company.**

2

This company was incorporated under the laws of Connecticut, May 22, 1879, under a broad and liberal charter, enabling it to purchase and develop any new inventions of merit and profit, it furnishes its capital to aid the inventive genius of the world, for it is not limited in its operations to this country, but can extend them, as its name implies, all over the globe. The company now owns Berney's spark, smoke, gas and steam consumer, one of the most valuable inventions ever made, for it not only rids the railroad companies, adopting it, from risks of fires along their lines from sparks from locomotives, preserves our forests from destruction, and saves property and even life from burning bridges, but ministers to the comfort and pleasure of travel, and prevents the waste of fuel from incomplete combustion. The invention is being rapidly adopted by the far-seeing officials of various railroads, and it will not be surprising to see advertised next summer "Berney's Spark Consumer and Smoke Preventer applied to all locomotives on this line," as an additional inducement for travelers, in the same manner that railroads announced their adoption of the Miller platform and coupler as a means of safety. The public will insist upon it and railroads must have it. In addition to the spark arrester Col. Berney has paid attention to other improvements in the locomotive, such as the "Variable Exhaust Tip," "Berney's Safety Valve Muffler and Feed Water Heater," "Berney's Feed Water Circulator," and "Anthracite Waste Consuming Locomotive." This last will be likely to prove the most valuable of all the patents owned by the Globe Company, for by means of it millions of tons of worthless coal dust can be utilized.

The semi-annual statement of the condition of the Globe Company has been published, showing a clear surplus above the capital of \$1,000,000 of \$52,926.21, and the third quarterly dividend of  $2\frac{1}{2}$  per cent on the preferred stock will be paid February 1. This stock, of which there is only a limited amount, is sold at par value, \$25 per share, thus paying 10 per cent interest annually. Applications should be made to the company's office, Rialto Building, 131 Devonshire street, Boston.





## OUR NEW INVENTIONS.

During the year 1880 every plan and device was tried to improve the locomotive by our General Manager, and we are pleased to state that many of them were successful, and are not only in practical use, but patents allowed for them. The Company will soon have their

### ANTHRACITE WASTE-CONSUMING LOCOMOTIVE

out. This wonderful engine will prove that the 100,000,000 TONS OF ANTHRACITE WASTE can be successfully used as fuel in locomotives.

As the daily production of this waste would furnish fuel for nearly all the locomotives in the United States, but to-day is worthless at the mines, some idea of the value of the patents that control the use of it, may be seen at a glance.

### NEW TESTIMONIALS.

OLD COLONY RAILROAD, MASTER MECHANIC'S OFFICE, }  
Geo. W. Reynolds, Master Mechanic,  
Taunton, January 20th, 1881. }

A. BERNEY, ESQ.—

*Dear Sir:*—I have fitted several locomotives with your Spark Consumer; the two last with your later improvements. They run clean, free from sparks, no fires could be set from the stacks, very little smoke, and plenty of steam.

Yours truly, GEO. W. REYNOLDS.

MACHINERY DEPARTMENT, }  
CUMBERLAND AND PENN. R. R.,  
Mt. Savage, Md., January 3, 1881. }

COL. BERNEY:

*Dear Sir:*—Our engine is doing very well, indeed. She could not do better if I was to try. She has not lost a trip since she came out of the shop. Keep close to the principle we have here; it will work on any railroad. Invite railroad men to come on this road and see its workings. Boston is too far away for southern roads.

Yours very respectfully, N. W. HOWSON.

GREEN BAY AND MINNESOTA R. R., }  
Fort Howard, Wisconsin, Dec. 28, 1880. }

A. BERNEY, ESQ., General Manager GLOBE CO., BOSTON, MASS.

*Dear Sir:*—In relation to the performance of your Spark Consumer, recently applied to one of our locomotives, I am pleased to inform you that the engine steamed free, is comparatively light on fuel, and THERE IS NOT A SPARK OF FIRE SEEN OR FELT issuing from the stack; in brief, your Spark Consumer works entirely satisfactory.

Respectfully, E. OSBORN, M. M.



TO THE STOCKHOLDERS OF  
THE GLOBE COMPANY,

131 DEVONSHIRE STREET.

Boston, Mass., Feb. 1st, 1881.

*The fourth quarterly dividend of 2 1/2 per cent. (10 per cent. per annum) will be paid on and after May 1st, 1881, upon application at the office of the Company.*

*To those living out of the city, checks will be sent to them, upon notice, if they desire them for their dividends.*

HORACE P. STEVENS,  
Treasurer.

The management take great pleasure in informing you of the prosperous condition of the corporation. We enter upon the year with no debts of any description.

May 22d, 1879, we owned one patent, but on May 22d, 1881, we will own, or have control of nearly thirty valuable patents, over one-half of which will have SEVENTEEN YEARS TO RUN, being the new patents to be used by The Globe Company. A career of prosperity is now open to us never excelled by any corporation. WE SEEK TO DO GOOD,—to save the precious fuel furnished by nature.

All the genius in the world cannot make one pound of coal. It will be seen that if we can save, as we will do, MILLIONS OF TONS OF COAL, that our Company is to become a benefactor of our race. The thousands of pamphlets we are issuing are awakening public attention to the great waste now going on in the COMBUSTION OF FUEL, as well as the nuisance created by the persons so wasting it.

The thanks of the full Board of Directors were unanimously voted to the President, General Manager, Secretary and Treasurer, for tendering their services, without salaries, for the year 1881, they all being large stockholders, determined to lessen the expenses and make larger dividends. The executive officers feel assured that their action will give confidence to all concerned.

*The new \$25.00 certificates are now ready for delivery, and will be exchanged only on presentation of the old stock, at this office, in person or by mail.*

*Stock sold at the office for Stockholders without any expense, also at public auction at 1-2 per cent. commission, or at the Brokers' Board after April next.*



By order of the Board of Directors.

GEORGE E. DUTTON,  
Secretary.

Boston, Mass., Feb. 1, 1881.



# 10 PER CENT. INTEREST, Payable Quarterly.

## A LIMITED AMOUNT OF THE PREFERRED STOCK

of The Globe Company is now offered for sale in shares of \$25 each. This Stock is but one-quarter of the whole capital, and must receive 10 per cent. dividends or interest before the Common Stock does any.

This is more than double the interest now paid by savings banks, and on bonds, and this Company will soon pay even more than that.

The dividends are sent by mail to every owner of Stock, by Check, or by calling at the office of the Company, promptly, on the 1st day of February, May, August and November.

To enable persons to purchase this Stock, subscriptions will be received on the following easy terms:

One-quarter when subscribed for;

One-quarter one month from date of subscription;

One-quarter two months from date of subscription;

One-quarter three months from date of subscription;

When the Stock and one-quarter's interest, or dividend, will be paid to the subscriber.

## SEMI-ANNUAL STATEMENT.

The following is a copy of the sworn statement of the President and Treasurer, showing the condition of the affairs of the Company January 1st, 1881.

Liabilities, None.

Surplus above Capital Stock, - - - \$52,926.21

In seven months active business, which is now established, our three shops are supplied with first-class tools, and no more required. Our offices fitted up. Three dividends paid and others provided for.

JOSEPH KELLY, President.

GEO. E. DUTTON, Secretary.

HORACE P. STEVENS, Treasurer.

FRANK P. EPPS, Ass't Sec'y.

A. BERNEY, General Manager.

## DIRECTORS.

A. PETTIGREW, of Gloucester,  
H. WONSON, of Gloucester,  
EZRA MILLER, of New York,  
A. BERNEY, of Boston,  
A. T. SMALL, of Holbrook,  
O. L. YOUNG, of Cambridge.

H. P. STEVENS, of Boston.  
N. A. DUTTON, of Boston,  
G. E. DUTTON, of Boston,  
JOSEPH KELLY, of Providence,  
B. DUTTON, of Charlestown,  
NATHAN DAVIS, of Groton.